

THE
BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. XXXI.

WEDNESDAY, JANUARY 8, 1845.

No. 23.

ON FEVER.

By Thomas Hodgkin, M.D., London.

[Communicated for the Boston Medical and Surgical Journal by the Medical Department of the National Institute, Washington.]

To Thomas Sewall, M.D.

MY DEAR FRIEND,—On thy return to Washington I shall be obliged by thy expressing to the members of the American Institute my grateful sense of their kindness and esteem in electing me a member of their body.

I admit the justice of thy remark that a member should be expected to contribute to the papers of the Society in which he is enrolled, and I would gladly comply with thy request to let thee be the bearer of my contribution, if I were already prepared with an original paper worthy of the Society's acceptance. It is rather to prove my readiness to adopt thy suggestion, than with the expectation of now producing such a communication as I should wish to make, that I proceed to put to paper a few observations on the subject of Fever, to the pathology of which my attention has long been turned.

Within a year or two I have been much interested by some excellent articles on this subject which have been produced by American physicians; and by taking up the subject in allusion to them, I shall be affording some little proof to thyself and thy colleagues that your writings are not unknown or unappreciated on this side of the Atlantic.

It will, I believe, materially contribute to the intelligibility of my little paper (which, I fear, I must commit to thy hands in a shorter compass and a less finished state than I like), if I refer to the latter part of my second volume on "The Morbid Anatomy of the Serous and Mucous Membranes," of a copy of which, I must ask thee to be the bearer for my library.

It is well known that the important labors of Broussais, though they were not the first to call the attention of medical men to the condition of the alimentary canal in common fever, gave an importance to the subject, and inspired a zeal for the investigation, which has never before been so general, or so operative. The term gastro-enterite then became to his numerous disciples, not only in France but in other countries, almost, if not wholly, synonymous with fever, including all its varieties,

from the simplest gastric disturbance, to the worst forms of epidemic typhus and jail fever which medical authors had described.

Considerable practical good, though not unmixed with some evil from overstrained apprehensions, resulted from this attention to the disturbance of the alimentary canal in fever; but the greatest advantage which our profession has derived from the new doctrine has unquestionably been, the stimulus which it has given to more extended and more accurate pathological investigations, which have been conducted with the assistance of far more correct knowledge, both of healthy and diseased structure. I shall not attempt even to enumerate the laborers who have been advantageously engaged in this field, my object being more particularly to notice those of Professor Louis in Paris, and of some of his disciples in America, in relation to one particular conclusion at which they have arrived.

The observations of Professor Louis are entitled to the highest respect, not only from the personal character of their author, but from the unexampled perseverance and systematic character with which they have been carried out, and the influence they have exerted in establishing a new and important mode of conducting pathological inquiries.

The most remarkable result at which he arrived from his personal observation, was, that in every case of fever the patches of aggregate glands towards the termination of the ileum were in a state of inflammation, and that the acute inflammation of these textures was confined to this affection. I think the Professor has gone no further than to announce the fact, without attempting to make the conclusion of universal application, though, with the multiplied instances before him, it would have been perfectly natural had he done so; and I believe that many have been induced to regard the derangement of these glands as constituting the essential character of what is commonly known as fever.

The researches of my much-lamented friend Dr. Jackson, Jr., of Boston, those of his father, and of my friend Dr. Bowditch, have shown, that in America also this affection is the prevailing accompaniment of fever. In England, many inquirers, amongst whom I may include myself, have witnessed the great frequency of this local derangement in our fevers. Notwithstanding the multiplied evidence in confirmation of the great frequency of the derangement of the aggregate glands, which must have strengthened the Professor's conclusions, additional observations, extended to other districts, have produced the admission that serious illness, having the characters of fever, does in some places occur, unaccompanied by disease of the aggregate glands, proving the importance of the admirable caution with which his former conclusions were drawn and expressed. In his last edition he has devoted several pages to this subject, and on the evidence of one of his pupils who had studied the fevers of England and Ireland, he admits the existence of a disease in these countries, presenting many of the symptoms described by former writers on fever, though wanting in some of the features which his own important investigations have shown to be the concomitants and characteristics of the disease of the aggregate glands.* The very careful and valuable

* I allude to Dr. Shattuck, of Boston, with whom I must also mention Dr. Lombard and Dr. Dalmas.

observations of Dr. Hale, in the Massachusetts General Hospital, are in striking concurrence with those of Dr. Shattuck, but being made under more favorable circumstances, they are more complete as to number and details. My own very numerous inspections have furnished me with many instances of fever with unequivocal and great derangement of the aggregate glands, with others in which their derangement was extremely slight, and again with others in which its existence could not be contended for by the most biassed observer.* Hence I not only fully believe in the accuracy of the statements made by the distinguished writers whom I have mentioned, but can confirm them by corresponding observations recorded long before my separation from Guy's Hospital in 1837. Perhaps we do not, in reality, materially differ as to the main conclusions to be drawn from these observations; but be this as it may, it appears to me that some objection may be raised to the terms in which these results are stated; since it would not be difficult for the reader, and more especially the junior student, to form opinions which, I think, would be erroneous, and which might be even injurious in their practical results.

The case as it now stands, I apprehend to be simply this. A disease is admitted to exist in England and in the United States (and if in these countries, probably in many others) in which the symptoms described by the most accurate medical writers of former periods as occurring with, and characterizing fever, described as typhus fever, attacks and carries off its victims without there being on dissection any evidence of the aggregate glands being affected during the course of the malady. To this it is proposed to restrict the term "typhus fever," whilst to that disease in which the glands are affected, and which, with various peculiarities, may present most, if not all, the more remarkable and formidable symptoms of typhus fever, the term "typhoid," or resembling typhus, is proposed to be applied as the exclusive and distinctive name.

I am far from undervaluing the great importance of distinguishing by separate terms things which are really different; and I think, in the instance before us, modern, correct investigation has made us acquainted with characteristics which distinguish a particular affection from others with which it was formerly confounded; but the terms employed are unfortunate, and may probably conduct the reader to misapprehension.

I believe that we are warranted in concluding from the very great number of careful inspections that have now been made and recorded in different parts of the world, that a considerable proportion of the cases of disease which have occurred as epidemic, or sporadic fevers, and more particularly those which have been mentioned as typhus fever, have really been cases of that disease of which the most important anatomical lesion is that of the aggregate glands. To this many of the observations, precepts and prognostics of our predecessors apply. If we say these are not cases of typhus fever, that typhus fever is something else, and

* Dr. Hale has fallen into a mistake in stating that so late as 1830 it was not the practice in Guy's Hospital to open the intestines of fever patients. From the early part of 1826, almost all the inspections were made by myself, and it was the rare exception to omit the examination of the intestinal mucous membrane in all cases; a fact which the records of inspections, preserved at the Hospital, will fully prove. The majority of Dr. Bright's cases were amongst the number.

that these are merely a resemblance of the disease, the student, instead of attaching its true importance to a valid distinction, will probably entertain imperfect ideas regarding the peculiar disease of the aggregate glands, and probably still more vague or erroneous views regarding some other affection which he is to call typhus, which he does not know whether he is to regard as seated in the brain, the lungs, the liver, or the spleen, and to which, indefinite as it is, he will be induced to refer whatever may have been said of a practical value regarding the treatment of typhus or adynamic fever. I highly approve of the distinctions of disease founded on the situation of the part essentially affected; but, if we make our division on this principle, our terms should be in accordance with it, or else be purely conventional, and not calculated to convey an idea of a different kind.

It is my firm persuasion that formerly, as at present, the majority of the cases of severe fever, presenting the greatest number of those symptoms the presence of which is characteristic of what has been designated typhus, have occurred in epidemics in which the aggregate glands have been the seat of the most important lesion. It would therefore seem an unfortunate change of names, now to employ it in a different sense, and to speak of those very cases which have really furnished the type of typhus as essentially differing from it, and presenting only a close resemblance in some points. If we employ a classification founded on the seat of the principal lesion, it would seem desirable that our names should be expressive of the facts on which we lay the greatest stress. To such a classification, as a morbid anatomist, I should strongly incline to give the preference.

I may compare the case before us to the linear representation of the figures in a picture comprising a large group. To all or any of these figures we may give a certain color, which may have its importance but be a totally different ground of distinction from the former. Thus the whole picture may be in Indian ink, or in grey tint, or some other color; or individual figures in the group may be distinguished by employing these colors separately. Now, in typhus, and in some other affections, the state of the patient seems to be dependent on a certain general condition, rather than upon the functions and sympathies of a particular part which may be diseased, however important the local affection may be as the primary and essential seat of the malady. In other words, there are features of disease depending more on the *character* of the derangement, whether local or general, than on its *particular seat*, and the functions of the part affected. We may in the same case have symptoms of both kinds. For example, we may inoculate a person with smallpox in the hand, and in the course of the symptoms which follow he will be more or less deprived of the free use of that hand; and if the virus had been inserted in the foot instead of the hand, a certain degree of lameness of that member would be the result. So far the locality of the primary affection creates a difference; but when we come to the general symptoms, we may have the pustules numerous or rare, we may have blindness, pyalism, convulsions, consecutive fever, and petechiæ, without

any relation to the spot inoculated, but influenced by the morbid poison, the season, the mode of treatment, &c. I cannot but regard the state designated as typhus, and marked by the assemblage of certain symptoms, as possessing such general character, and that whilst we do most frequently have it present as the effect of disease in the aggregate glands, it is necessary that that derangement be of a particular kind. On the other hand we may have this particular kind of derangement, of which the essential characters are probably rather chemical than anatomical, situated in some other part of the body; as, for example, in the tonsils in scarlatina, in the large intestines in the worst forms of camp dysentery, in the cellular membrane in plague and hospital gangrene, and in the lungs in typhoid pneumonia.

I do not present this idea as original, since it seems to be that which our most accurately-observing predecessors pointed to, when they spoke of disease passing into a state of typhus; their general notions of typhus fever being derived from their appearance in the worst forms of fever which they sometimes called putrid, and in which the characteristics of this state very early appeared. Other cases in which these symptoms were less marked would be called typhoid, from bearing some resemblance to the severer form. The etymology and the application would therefore perfectly agree.

Our predecessors were not sufficiently guided by minute and accurate pathological research, and in supplying this desideratum we must not lose sight of that which they had accurately pointed out. As we proceed, bearing this in mind, we may at the same time accurately localize diseases to which they were unable to assign any definite seat of primary lesion, and also elucidate the conditions on which the general state depends, which probably in more than a few instances will be found rather within the province of the chemist than in that of the anatomist, though the latter be assisted by the most powerful microscopes. In this particular line of inquiry we doubtless owe much to Dr. Prout and Professor Liebig, and whilst I would particularly signalize the latter for the comprehensive and systematic view which he has given, I cannot but avow my dissent from many of the statements in his "Animal Chemistry," which show that he has labored under imperfect and erroneous ideas regarding the subjects on which he has reasoned.

In my twenty-third lecture, to which I have already referred, I have ventured to suggest the mode in which I conceive the animal chemistry may be disturbed in the state which we term "fever," and have adduced some of the facts on which this opinion rests.

It is, I understand, the opinion of Professor Rokitsanski, of Vienna, the most practised pathological anatomist of the age, that something peculiar is produced in the system in that state of disease which is known as typhus, but I am not aware of the characters which he ascribes to this product; yet it is pretty evident that its full admission will not clash with the view which I have taken, but, on the contrary, that our views will rather tend to confirm each other.

I may here add another remark which has suggested itself to me in

consequence of some conversation with that distinguished professor, during his visit to England last year. We were conversing respecting certain derangements of the spleen, when he laid particular stress on one form, marked by partial deposits in the structure of the organ, which he had been induced to connect with endocarditis, and believed to be brought about by the contamination of the blood through that affection. I have had some opportunity of confirming the justness of the Professor's observation as to the concurrence of the two affections, and the idea thus suggested that the altered condition of the blood produced phenomena which are exhibited in the spleen, did not fail to strike me, as I doubt not it has the Professor himself, as connected with the state of the spleen in fever. I allude to its softened consistence and altered color, rather than to the enlargement of the organ which takes place in intermittent fever, the cause of which is, in part, mechanical. The almost constant derangement of the spleen in fatal cases of fever is one of the facts which the invaluable researches of Louis have placed beyond all doubt. This derangement consists more in a change of texture than of size, though this is generally somewhat enlarged. It is remarkably softened, so that, in extreme cases, we cannot cut through it as a solid body, and it has more the character of a grumous mass enclosed within its capsule. It is frequently of a deep venous hue, which we have no difficulty in ascribing to impeded circulation through the porta, occasioning some accumulation of venous blood in the spleen. It is, however, much more common to perceive this venous color internixed with, and even subdued by a material which gives a lighter color, and produces a sort of lilac tint. The production of this lighter substance appears to me to be unequivocal evidence that some degree of inflammation has existed, causing separation of coagulable lymph from the blood, whence I am inclined to believe that the altered condition of the circulating fluid in fever produces a direct effect upon the spleen, as in the cases of endocarditis noticed by the learned Professor of Vienna. That in the one case it exhibits itself in isolated spots, and in the other in a more diffused form, producing a motley appearance, or affects the whole organ, causing an uniformity of color, is not easily to be accounted for; but it is not more wonderful than that the poison of one exanthem should produce diffused erythema, and another distinct spots.

That a light color should be evidence of inflammation, whereas redness is generally regarded as an indication of this condition, will not be matter of surprise, or doubt, when we consider the parts in which this fainter color is the result of inflammation. They are precisely those structures in which minute bloodvessels abound, so as to constitute a plexus of capillaries or mass of erectile tissue. Determination of blood, or mere congestion, may increase the size, or produce a venous hue, but can scarcely increase the redness of such parts, already so well supplied with blood. Inflammation, on the contrary, not being mere hyperæmia, but likewise inducing an alteration of structure, causes the separation of lymph, and consequently the reduction of color before alluded to. We see examples of this in inflammation of the liver, whether induced by local violence or

other causes, a fact to which my attention was called many years since by my friend Dr. Foville. In confirmation of the universality of the principle, we find analogous appearances in the spleen, as has been already stated—in the cortical substance of the kidneys—in the substance of the heart, and in other red muscles—in the corpora cavernosa—in the substance of the lungs, &c.

It is time that I should bring these hasty observations to a close, and I shall be abundantly satisfied if my fellow-members condescend to receive them as they are intended, and regard them as a proof of my willingness to use the pen in their service, as well as to comply with the wishes of their excellent colleague, Dr. Sewall. I must, however, be permitted to make one additional observation, viz., that neither the view which I have been led to take regarding the general state of the system in fever, nor that which I take of local affections, whether of a primary character, as the derangement of the aggregate glands in many cases of fever, and of the tonsils in angina maligna; or of a secondary character, as the derangement of the spleen here alluded to; consecutive pneumonia, eschars on the back, and the so-called critical depositions of matter, militate against the employment of any of the various yet equally approved methods of treatment; but, on the contrary, they rather tend to harmonize conflicting opinions, and guide the selection and application of remedial measures. Though I have mentioned some local affections as primary, I am aware that they may be only relatively so, and that before sore throat is felt in cynanche maligna, or any derangement has been detected in the bowels in fever, some latent yet preparatory change may have been going forward; and we may probably appeal to the prevalence of a particular state of the spleen in patients dying of all diseases, during the prevalence of what may be termed an epidemic influence of the atmosphere, as bearing upon this question.

THOMAS HODGKIN.

London, 18, 9, 1843.

"LIST OF ARTICLES IN THE MATERIA MEDICA, &c."—REPLY TO
"A CONSTANT READER."

To the Editor of the Boston Medical and Surgical Journal.

SIR,—I was somewhat surprised and a little mortified on reading in your Journal for Dec. 25th, some very severe, unjust, and incorrect remarks on a pamphlet bearing this title, "A List of the most important articles of the Materia Medica, with their doses in substance, infusion, tincture, extract, &c., together with tables of weights and measures, observations on the art of prescription, &c."—a pamphlet containing, from "title to colophon," some eight pages octavo, printed for private circulation, never intended to be sold out of the Medical College, and therefore hardly amenable to criticism in a public journal. The gentleman reviewer says he lacks a reason for the appearance of such a pamphlet. The circumstances of its publication may explain this. I had received, from England, the second edition of a very excellent work, "Hoblyn's Dictionary

of Medical Terms," in the appendix to which was the admirable list reprinted in the above pamphlet. Some of my friends in the Tremont Medical School seeing this, suggested having it printed in pamphlet form, to accompany their note books, and to serve for immediate reference—a purpose to which its alphabetical arrangement admirably adapted it. Afterwards they proposed the addition of tables of weights and measures, &c. A number of copies were subscribed for, the matter was sent to Mr. Dickinson, the pamphlet was printed, and "*voilà tout*." The curtain of mystery that shaded the birth of the eight-paged horror is rent asunder; and I hope my critic's doubts are satisfied. The "Constant Reader's" miserable situation in being reduced to criticize a title page and preface, as (probably ignorant of the meaning of *l'Envoi*) he calls a jocular announcement of six lines, is so pitiable that I will pass it by, merely asking him what he means by the *puerile* pedantry of a school boy, receiving a ferruling. Is the process of ferruling peculiarly calculated to the production of that quality? The article on the art of prescribing medicines, which he characterizes as vague and unsatisfactory, is extracted, *verbatim et literatim*, from the Conspectus of Anthony Todd Thomson, Professor of *Materia Medica* in the University of London, and one of the very best authorities on medicines and their uses, in the world. The single axiom which the "Constant Reader" extracts, as peculiarly vague, is a simple statement of a fact, and for a medical work remarkably clear and intelligible. The simple dictum of the learned critic, being enough, however, to despatch the unfortunate article, he proceeds, Bobadil-like, in a jiffy to prostrate "the List," whose errors arise like the heads of hydra to be attacked by his heroic pen.

The critic lays particular stress on the omission from the list of the hydriodate of potassa—and the placing the dose of strychnine, as he says, at one grain—as the List, however, says, gr. 1-8—gr. 1. 1st, the hydriodate of potassa being generally exhibited in the form of the hydrated salt, is placed among the liquors, thus, liq. potass. hydriod., m. x—m. xx. In regard to the dose of strychnine, the critic, I think very unfairly, does not mention the minimum dose of gr. 1-8, but always the maximum of 1 grain; in his own words, "is this decent or proper?" The grain dose certainly sounds large, but is seldom used in such quantity, except endemically (vide the article on stimulants in the *Cyclopædia of Practical Medicine*, where the dose by this method is stated at one grain and over)—the maximum dose internally being about gr. $\frac{1}{2}$. Dr. Pereira places the dose of strychnine lower than other writers, a fact of which my critic was not perhaps unmindful, as producing a greater contrast with the doses on the list. In the excellent treatise on stimulants before referred to, the commencing dose, in paralysis of the lower extremities, is given at gr. 1-10, increased till the tetanic spasm commences, which it generally does when the dose reaches about gr. $\frac{1}{2}$.

The rest of the critic's censures regard principally the omission of certain secondary preparations of iron, and some drugs, also of a secondary importance, and the perfect omission of articles of the American Pharmacopœia, and especially of that invaluable medicine, bloodroot. I

am very sorry that he did not look over the pamphlet more carefully ; he would have saved himself trouble, and perhaps never have written such an article. He would have seen, in the first place, that the list was of the most *important* medical agents, and therefore included few secondary preparations or remedies. In the second place, he would have seen, that being a list of the medicines adopted by the London College of Physicians, it did not contain any of the drugs peculiar to the American Pharmacopœia. Again, he would have seen that the hydriodate of potassa (the omission of which he mentions twice), was not omitted, and he also might have saved himself that exclamation point after mentioning the grain dose of strychnine.

I might, perhaps, have refuted the lumbering sarcasm of my friend even more fully, but I have prosecuted the subject *ad nauseam*, and I can assure him that he never would have heard from me if the pamphlet had been of my own writing ; but I felt bound to defend, to the best of my ability, the authors from whose works I had compiled it. As the critic (with every disposition to do so) has found in the "List," &c., no real error, I begin to think it may be of more general utility, and a small edition of it (the size being really an objection to the first edition) will be for sale on Washington street in a few days. What the critic says about the pamphlet selling for 37½ cents is not correct, that price never having been asked for it ; and in fact it has never been offered for sale out of the Medical College. In parting with my professional friend (and I assure him he will probably never hear from me again) I would humbly thank him for the lenient manner in which he has passed over the table of weights and measures, which offer a fair field for his critical talent. Perhaps they will form the subject of another article. I bide my time.

January, 1845.

H. A. M.

LEPROSY HOSPITAL IN HAVANA.

ANOTHER charitable institution, well worthy the attention of the stranger, is the hospital of San Lazaro, destined chiefly to succor those unfortunate persons affected with the incurable *kocubea* or *lazarino*, commonly called leprosy, a disease, I believe, peculiar to the West Indies, and which I have never seen in any European hospital. It commences its ravages on the toes and fingers, which first become atrophied and distorted ; then a small blister appears on their extremities, and joint after joint decays and falls off, until sometimes the whole hand to the wrist, and the whole foot to the instep, is thus destroyed. Some recover with the loss only of the first and second joints of their fingers or toes ; but the stumps remain quite insensible ; and a patient informed me, that he was conscious of the effects of fire on his hand only by the blister caused by the burn. Only a partial motion is retained in these curtailed members, but it is surprising to see how much an almost fingerless hand can perform.

This disease is probably ossification of the arteries, on which an inflammation supervenes, closing their calibres, and death of the part en-

sues, as in senile gangrene. It is regarded by the Creoles as contagious; and any one affected by it, if seen in the streets, is at once conveyed to the hospital. No instance has, however, been related of its spreading there to the nurses or physicians; and I have myself known the father of six children, who, although long a martyr to this affection, never communicated it to them or his wife, although they visited him constantly in the cottage where he lived, separated from the other negroes, on a coffee plantation.

This hospital, like similar establishments in Cuba, was built around a central square, in the middle of which was an additional building, like the main one, of a single story, having a wide piazza before it. The whole was divided into small apartments, each destined to accommodate a single individual or family, and in the central building there were a few wards set apart for fevers and other acute diseases. It seemed to be an asylum for those affected with cutaneous diseases, but the greater number was suffering from the kocubea, and from elephantiasis of the feet, hands, and face; a disease very prevalent in the West Indies, and as incurable as the other.

I had been met near the gate by one of the patients, a black man, who volunteered to be my cicerone, and while he led me through the different parts of the establishment, I gratified him by listening patiently to the history of his own case. Henry Albert was a Philadelphian, had been a sailor, and on a visit to St. Jago de Cuba, was attacked with kocubea. Finding no relief from physicians there, he came to Havana, and was sent to his present quarters. He had lost nearly all his fingers; but the disease was now checked, and he was quite contented with his quarters, than which none could be more pleasant for a negro; he had plentiful supply of food, and could sleep as long as he wished. After dwelling particularly on these comforts, he pointed to a small chapel, and said, "we have service every Sunday, by a padre, who tells us many good things; that we must be good here, too late when we are dead to reform, a great deal about Santa Maria, Christ, and God, and then he says many long prayers, that no one understands." I told him I was happy to learn that his soul as well as his body was cared for, and advised him to profit by what he could understand of the service.

About thirty white and sixty colored patients were lying on beds, or promenading under the corridors, presenting every degree of deformity from the ravages of the disease, and to any but a medical man, a repulsive sight of human suffering. But even here could the heart glean delight, in the contemplation of man's love to his fellow man, and even the abolitionist learn a lesson, in the treatment of his colored brethren, who here received the same attentions as the whites. It was pleasant also to reflect that the balm of religion was poured on the sorrowing minds of these outcasts from society, doomed through life to be the tenants of prison, and to witness around them nought but foul disease.

As I was about to depart, Henry urged me to pay a visit to the portrait of a great saint, who, he said, had given a hundred million dollars to the Hospital, and the adjoining sea-coast as far as the eye could see. I

went, and was shown the portrait of the founder, Pedro de Alegre, resembling one of Vandyke's; with mustaches, a peaked beard from the chin, and ruffles around the neck, so thick that the head, held stiffly erect, seemed supported by them. There was an expression of goodness in the countenance, not always seen in those of the founders of hospitals and churches, and it was, moreover, blended with one of discernment, if the rules of Lavater be correct. He had, in 1681, appropriated a large amount in jewels and other valuables towards the erection of the building, which was farther hastened through the exertions of the Marquis de Casa Torres, and by a tax of \$18,000 collected by the governor Don Dionesio Martinez. On stepping into my volante, I left a small donation in what remained of the hand of my cicerone, and made one of his cronies, who gazed wishfully at it, superlatively happy, by tossing at him a single medio, for which he returned a hearty benediction.—*Notes on Cuba.*

ON SOME OF THE DISEASES OF THE EAR.

From Mr. Liston's Recent Lectures on the Operations of Surgery.

WITH regard to the ear, I have already spoken of foreign bodies in the meatus, and I stated that they were to be removed in much the same way that you would extract foreign bodies from the nostril. You must not attempt their removal by forceps, but put a fine bent probe, or a scoop, behind them, and, with a slight motion of the wrist, you turn them out of their place. Before you make the attempt, you must be very sure that there is a foreign body in the ear. This you can ascertain by using a speculum, which enables you to see perfectly into the bottom of the external meatus. The patient must be placed in a proper light, or the part may be illuminated by a good lamp. The rays of light may be brought to a point, and thrown into the bottom of the tube, as ingeniously devised by my friend Dr. Warden, through the medium of a small prism, adapted to the speculum.

You meet with cases of inflammation of the meatus from various causes—cold, &c. These inflammatory affections often end in abscess; you endeavor to prevent it by the application of leeches to the part; but when matter is formed, its escape is to be favored, and for that purpose fomentations should be applied. You may meet with cases where the abscess is apparent, and then you can puncture it. These abscesses are always attended with very great suffering: the parts are highly sensible when in a state of health, but still more so when diseased; the abscesses, however, generally burst spontaneously in the course of a very short time, and then the patient is relieved.

Deafness, of course, will arise from the presence of foreign bodies, or from the swelling of the meatus or parts around it. It frequently takes place in consequence of the accumulation of cerumen, and, indeed, this is the most common cause of deafness, and nearly the only one that you can with any certainty count upon removing. Old people are often re-

lieved from deafness of long standing, by having foreign matters washed out from the external meatus. There has been a discussion as to what is the best solution to employ for dissolving the accumulated secretion. You will, in one of the volumes of the "*Edinburgh Medical Essays*," find a very good paper on the subject, in which are detailed trials with various alkaline and other solutions, and the conclusion arrived at is, that tepid water will answer as well as anything else. You use for the purpose a tolerably large and well-valved syringe, with a properly-fashioned nozzle; now and then you use a scoop, and pull out portions that would not otherwise come away. You often find large plugs of cerumen mixed with cotton and wool, which patients have put into their ears, to prevent cold air getting in, as they say. It is also said, that deafness arises from there being too little wax, from the ear being dry, and in these cases all sorts of stimulating oils have been dropped into the ear, with, I believe, but little advantage. Then you find deafness arising from obtuseness or paralysis of the nerve, and that is thought sometimes to be remediable. You may endeavor to rouse the sensibility of the parts by blistering over the mastoid process, and sprinkling the raw surface with strychnine in minute quantities.

Deafness also occurs to a greater or less extent (and this is irremediable) where suppuration has taken place in the internal ear, and where the bones of the tympanum have been destroyed. You cannot restore these parts, and you cannot expect the functions to be restored, for there is a great change of the structure of the organ. Patients often continue to have a discharge from the ear for a long period; there has been an attack of inflammation and suppuration during some inflammatory affection or fever of childhood, as scarlatina; it goes on for a long time, and parents desire to have it dried up; but beyond having the part kept clean, I advise you not to interfere. If you employ a strong injection, you may give rise to disease in deeper seated parts, and endanger life.

There are discharges from the external ear now and then connected with abscess situated deep in the temporal bone. I have seen two or three cases where the matter which had formed within the cranium was discharged by the ear. There may be abscess of the brain, or abscess between the dura mater and the anterior aspect of the temporal bone; and this certainly cannot be remedied by any external application. I have seen the discharge checked by long exposure to cold and wet, fever has ensued, and the patient has speedily perished.

The functions of the ear are sometimes interrupted in consequence of affections of the throat. Common people know that when the "almonds of the ears," as they say, come down, they are deaf. If the tonsils remain enlarged and swollen, the hearing is obtuse. The same thing occurs from polypi and other tumors of the throat. In cases in which I have removed them, the patient had been deaf for years. I have mentioned in one of my books the case of an old gentleman who had been deaf for very many years; he went regularly to church, for form and example's sake, it would appear; for after a great many polypous tumors had been extracted, he declared that he never, till then, heard one

word of the service. The tonsils have been removed now and then with great advantage in cases of deafness, but though relief has been thus afforded, I would not by any means advise you to resort to it in all cases. You are not warranted in cutting away the tonsils or uvula under the assumption that they are the cause of the deafness, more especially when there is but little, if any, abnormal change in them.

After all, there is not a great deal to be done for the cure of deafness. There are many cases easily remedied, but a great many others are quite irremediable. The deafness which ensues in consequence of the deficiency or destruction of parts cannot be remedied; in many cases where the nerve is affected, no relief can be afforded; but where it arises in consequence of obstruction of the Eustachian tube, or the presence of tumors, the surgeon may sometimes afford considerable relief. It has been said that deafness arises from the Eustachian tube being closed up by mucus, and in order to remove it, all sorts of quacks have been in the habit of injecting air and fluids into this passage; but the only effect of this process, so far as I can see, would be to drive the vitiated secretions further into the passages, and impact them there.

In some cases of permanent obstruction of the Eustachian tube, in cases of thickening and induration of the membrane of the tympanum, and in collections of blood in the cavity, the drum of the ear has been perforated. This is an operation not attended with difficulty. The only trouble is in keeping the opening from closing again. The operation may require repetition unless it is performed in such a way that a portion of the membrane is wholly removed. This may be accomplished by means of a sort of punch dextrously applied. The instrument must be so guided as to avoid the attachment of the handle of the malleus. I have, in a few instances, seen patients thus slightly benefited, but great success cannot be anticipated from the proceeding.—*London Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, JANUARY 8, 1845.

Chocolate.—One of the most common table articles in use is chocolate. In Spain and its dependencies, chocolate holds a place as prominent in dietetic economy, as tea and coffee in Great Britain and the United States. In all countries engaged in commercial intercourse, cocoa, in some form, has become a favorite kind of food, and it is therefore important to know in what state or condition it will be nutritious and not prejudicial to health.

A variety of chocolates are manufactured in Europe, which are in much request in our cities. The French *chocolat à la vanille* contains three ounces of vanilla, combined with two of cinnamon, to twenty pounds of common chocolate. These aromatics are very agreeable to the palate, but probably no person could habitually drink this highly charged mixture, in this climate, without discovering that its stimulating properties

were ultimately unfavorable. *Chocolat de santé* is a miserable French cook-shop farrago, wholly unsuitable for invalids.

In this country, a plain, wholesome chocolate cake and chocolate paste, both elegant preparations, have an established reputation. The consumption of that made by Mr. Baker, of Dorchester, Mass., and by others in New York and Baltimore, is prodigiously large, and they furnish the public with a wholesome article.

As in all other arts, an improvement has of late been introduced in this branch of business, which many medical gentlemen look upon with peculiar satisfaction. It mainly consists in extracting the vegetable tallow from the cocoa, by enormous hydrostatic pressure, leaving nothing but a light grayish powder, the essential property of the nut. A small quantity of this quickly diffuses itself in water, which, either for the sick or well, is a delightful beverage. Ordinarily, in five pounds of common chocolate, for example, it is said not far from two pounds of nut tallow may be separated. The presence of this substance, resembling oil, floating in the cup, is objected to by many physicians, as unsuitable for valetudinarians and those of feeble digestive powers; but no such objection is urged against the new preparation, which is favorably recommended by them. It is now manufactured in New York, by Mr. Wait. Mr. Baker, some years since, we understand, produced identically the same form of the cocoa, but considered it too expensive for extensive sale. If the consumption warrants the undertaking, however, he will at once embark in it. In the mean while, Mr. Wait, from certain facilities, leads the public to suppose that this improvement is not calculated to increase the cost so much as to exclude it from the table on the score of economy. For the feeble, the sick, and those who neither take tea or coffee, Mr. Wait's prepared cocoa is admirable. We are not altogether certain, however, that the presence of the vegetable tallow offers any valid objections to its continued use, when the consumer is in ordinary health. These observations on the so-called new improvement, have reference to the dry powdered cocoa, exclusively, and not to pastes or cakes, or any secret position of which cocoa is the basis. For ourselves, we are gratified in having this elegant, nutritious beverage to resort to, under circumstances where a medical attendant feels that the dietary for invalids affords no great variety.

Forces which produce the Organization of Plants.—Whatever may be said at this time in regard to a beautiful quarto on the "*Forces which produce the Organization of Plants*," which work we have before alluded to, may have been anticipated, in a measure, by other publications. It is the production of Dr. John W. Draper, of the University of New York. We have rarely seen a more thoroughly finished piece of typography. The volume is inviting from its white paper, distinct letters, and freedom from misprints or errors of the press. Dr. Draper must expect to meet with envious criticisms from various sources before this work fairly takes its place on the shelf with the highest scientific authorities. We have even heard it said already, that "it is made up of scraps, picked out of European authors." But it so happens that genius like his cannot be overcome or circumscribed by those who are only wise in their own opinion. We can point out individuals now enjoying the highest

public consideration in literature, science and the arts, who were spoken of with marked contempt for their efforts only a few years ago ; and now, these very same stationary critics, the sages of a little circle destined to be unknown to fame, court with obsequiousness the attention of the men who have grown to be their superiors in all that gives a character to men in the world. By the preface it appears that the idea of the connection of chemistry with vegetable physiology was conceived in 1833 ; but Dr. Draper was too closely occupied to give the results of his inquiries to the public, till the close of the last year. There are parts of this treatise which we have read with peculiar delight. The exact value of all the several chapters can be appreciated only, it is presumed, by a professed botanist and physiologist. All the general remarks on the influence of physical agents on organization and life, are beautiful. "The great idea which it is designed to illustrate, is that which connects the production and phenomena of organized beings with the imponderable principle." The topics, embraced in the five chapters, are as follows. On the action of the sunbeams in producing organized bodies ; on the mechanical cause of the flow of the sap in plants ; on the mechanical cause of the circulation of the blood ; on the physical constitution of the sunbeams on the prismatic spectrum ; on the interference of the spectrum, &c.

Were it the province of this Journal to dwell minutely on the special merits or demerits of publications not strictly medical, this work would have a valid claim to an elaborate examination. As it is, we are not willing to be silent, when such claims are presented as characterize this learned production. Were it in our power, we should be glad to do something more than simply wish it well.

Principles and Practice of Surgery—Dr. Gilbert's Introductory.—In the Pennsylvania College, located in Philadelphia, that focus of literary and scientific institutions, David Gilbert, M.D., whose name is known to the readers of this Journal, is professor of surgery. His introductory to the present course of lectures was given to the public by the class, evincing, on their part, discrimination and good judgment. Dr. Gilbert points out to the pupils, in this discourse, their real position, and indicates the obligations resting upon each individual in assuming the duties of a surgeon. There is no mincing matters about qualifications ; they must be prepared, or sink with contempt before the scrutiny of the public eye. He dashes in upon the quacks like a knight errant, sword in hand, while neuryptnotism, hydrosudopathy, homœopathy, Mesmerism, and all other odds and ends of things under the specious guise of medicine, are dashed against the wall. We are interested in the style, and especially in the vigor which the author manifests throughout the lecture. He is a native American in regard to surgery—pointing proudly to names for imitation that will shine with undiminished splendor in the records of national greatness, through coming ages.

Medical Chemistry—Dr. Atlee's Introductory.—An encouraging feature of the present day, is a growing attention to the study of a culpably neglected part of a regular medical education. Students have slipped in and out of the chemical room, for years, without reproof, and in the pro-

cess of examination for a degree, have adroitly contrived to evade a very exact scrutiny into their acquirements in the laboratory. To practise medicine in utter ignorance of the elementary principles of the glorious science of chemistry, is as absurd as it would be to endeavor to sail a ship round Cape Hatteras by following the course of a flock of petrels. Dr. Washington L. Atlee, now filling the chair of Chemistry in Pennsylvania College, has been complimented by the class in having an introductory lecture published, on the subject of Medical Chemistry. He is a beautiful writer, and exhibits a refined taste. We often regret our inability to publish, in extenso, such excellent specimens of medical literature; but it is quite impossible. We can only commend, in this case, as in many similar ones, and strongly recommend the production to the critical study of our professional brethren.

How to Study Medicine—Dr. Patterson's Introductory.—Pennsylvania College seems to have an active board of medical professors. Among the number, is H. S. Patterson, M.D., professor of Materia Medica and Pharmacy. His valedictory to the graduates was distinguished for its well-timed advice, and the delicacy and beauty of its style. His introductory to the present course, is chiefly devoted to the best method of pursuing the study of medicine, in order to be qualified for subsequent duties. He is down upon the text-books with a vengeance.—"Our booksellers' shelves," he says, "now groan under an unexampled accumulation of medical works, all pointing us to short roads into the central mysteries of our science. You see steam presses hissing and thumping in every city, rivalling one another in pouring out a stream of text-books, Elements, and Principles, First Lines, and Out-lines, with numerous Student's Guides and other medical stenography, which might well be classed together under the general head of *Lifts to Lazy Pupils!*" Dr. Patterson forcibly impresses the reader with the true value of an old quotation, appropriately introduced at the close:—"Ars longa, vita brevis, judicium difficile"—and paraphrased thus:

"Art is long and time is fleeting,
And our hearts, though stout and brave,
Still, like muffled drums, are beating,
Funeral marches to the grave."

Utility of Practical Medicine.—At Dover, N. H., a small religious paper is published, at irregular periods, called the Disciple, and furnished to readers without money and without price. Those who receive it may pay for it if they choose, or not. In the imprint it says, "*Terms free—as the gospel it brings.*" The editor, Dr. E. Mack, announces himself a physician, who has relinquished practice. He writes the articles, sets up the types with his own fingers, purchases paper when sufficient funds are furnished, and then prints copies and gives them away. He is a clear reasoner on all subjects he takes hold of, and evinces the pure spirit of christian love and philanthropy. Who ever wrote better thoughts on medicine than these, taken from a late No. of the Disciple?

"True medical practice contemplates the whole field of Nature for its resources, bringing to its aid arts, sciences and letters, and availing itself of the researches and experience of the past and the discoveries of the

present. From this whole field, aided by all these tributaries, it gathers, prepares and selects its means and instruments of healing, and in conformity to their respective properties, to the laws of life, of health and disease, it applies them, in each case, appropriately to the kind and the state of the disease, to constitution and habits, and to all the circumstances in the case. Not that the Science is perfect, or that there are not many instances of ignorance and stupidity among the members of the regular profession, and a great deal of inefficiency, rashness, essential quackery, and of mal-practice among them. Far, far from this! Yet is there realized in the practice of the profession generally, an amount of alleviation to human suffering, for which we may well be grateful to the Giver of all mercies "

Manufacture of Surgical Instruments.—In the final report of the Fourth Exhibition of the Massachusetts Charitable Mechanic Association, at Quincy Hall, Boston, in September last, a very flattering testimonial was given to Mr. N. Hunt, of this city, the ingenious maker of surgical cutlery. His amputating, trepanning, operating, dissecting and pocket cases, tonsil-cutters, lancets, specula uteri and ani, &c., were exceedingly beautiful. He also exhibited, on the same occasion, bone forceps, say the committee, of an improved shape, invented by himself, which received their particular commendation. The tonsil-cutter, and an anatomical syringe for injecting the absorbents, of excellent pattern and finish, were the first ever made in Boston. Mr. Hunt also produced a very large variety of dentists's forceps, well made, and "decidedly superior," say the board of judges, "to any other in the exhibition—especially in regard to joints." In short, "it was a full display," says the published report, "of the skill of a very meritorious artist, and the committee would express their unanimous approbation." A gold medal was also awarded. Mr. Hunt's establishment is deserving the marked attention of all medical strangers visiting Boston.

Class-book of Anatomy.—Mr. Robert S. Davis, Joy's Building, has put to press the *ninth* edition of this work. The increasing demand for it in colleges, academies, and, in fact, in schools generally, shows how highly the study of anatomy is prized by public instructors, and indeed by all persons of intelligence.

Manufacture of Castor Oil at the West.—Dr. Drake, in his Travelling Letters, gives the following account of the growth and manufacture of this important article in some of the western and other States.

"To pass from geography to pharmacy, I must tell you something about the manufacture of castor oil in this city (St. Louis) and some of the neighboring parts of Illinois. It seems to have been commenced by Mr. Adams, of Edwardsville (Peck's Gazetteer), about twenty years ago. The produce of the first year was 500 gallons, which he was then enabled to sell at \$2.00 a gallon. In 1831, he made 10,000 gallons, which he sold at 75 cents. From a gentleman of this city, who owns a steam oil press, I have some additional statistics of this important manufacture.

"According to his statement, the quantity now manufactured in Illinois and Missouri, is above 100,000 gallons a year; which is the produce of from 8 to 10,000 acres of land. The crop varies from 10 to 15 bushels an acre, each bushel yielding about 2 gallons of oil. Its price ranges from 75 cents to \$1 a gallon. In these latitudes the crop is somewhat uncertain, being liable to injury from long-continued droughts and early frosts. Indiana, Virginia and New Jersey furnish, together, from 25 to 30,000 gallons a year: Tennessee as much, perhaps, as she consumes. The castor oil bean flourishes well in Mexico and the West Indies, but the importation of oil is greatly diminished from what it once was; at the same time the price is much reduced, and the quality greatly improved."

Action of Light on Vegetables.—From a paper by Dr. D. P. Gardner, of New York, on this interesting subject, to which Dr. Draper has given much attention lately, we copy the following conclusions to which he has arrived. The paper referred to was first published in the American Journal of Science and Arts, and has also been printed or discussed in the London Philosophical Magazine, the new Edinburgh Philosophical Magazine, and the Bibliotheque Universale de Geneve, and was reported favorably upon in the French Academy of Sciences.

"In conclusion, it appears that the following facts have been established.

"1st. That chlorophyl (the green matter of leaves) is produced by the more luminous rays, the maximum being in the yellow.

"2d. This formation is due to pure LIGHT, an imponderable distinct from all others.

"3d. That the ray towards which plants bend occupies the indigo space of Fraunhofer.

"4th. This movement is due to pure LIGHT as distinguished from *heat* and *tithonicity*.

"5th. That pure LIGHT is capable of producing changes which result in the development of palpable motion.

"6th. The bleaching of chlorophyl is most active in those parts of the spectrum which possess no influence in its production, and are complementary to the yellow rays.

"7th. This action is also due to pure LIGHT.

"We have, therefore, an analysis of the action of every ray in the luminous spectrum upon vegetation. The several effects produced are not abruptly terminated within the limits of any of the spaces, but overlap to a certain extent, a fact which coincides with our experience of the properties of the rays. Whilst *heat* and *tithonicity* are capable of causing the union of mineral particles, *light* appears to be the only radiant body which rules pre-eminent in the organic world. To the animating beams of the sun we owe whatever products are necessary to our very existence."

Malformation of the Genitals.—Mr. Terry examined a child, aged two months, at the Northampton General Infirmary, on account of a malformation in the organs of generation. The mother, and grandmother, who came with the child, said that the external opening was closed, and the water came the wrong way, and that she was born so. At first, it appeared to be a common case of imperforate vagina. There was, however, a

little fulness, and a slight degree of prominence at the lower part of the supposed closed orifice, and, on proceeding to separate the adhesion, which required no cutting, and very little force, there was found something which looked like a penis. The parts were separated more extensively, and the parts which had been concealed more minutely examined; a glans penis and prepuce were then discernible, and the penis was complete, though confined and bound down to the neighboring parts. The vagina was sought for, but in vain. The scrotum, with one testicle down, and the other descending, was gradually developed, and the little patient was presented as an entirely male child. There was a slight indentation at the orifice of the urethra, but the canal was impervious, and the urine passed through a little opening behind the corona glandis, just at the insertion of the frænum preputii. There was a large quantity of loose cellular substance, covered by integument, in the neighborhood of the parts, so that even after the separation of all the adhesions, the slightest lateral pressure with the fingers gave again the appearance of a closed vagina covering and entirely hiding the penis and scrotum as before.—*Provin. Med. Journal.*

Rupture of the Liver.—A sailor, 29 years of age, was admitted into the London Hospital, having had a piece of beef, weighing a hundred weight and a half, fall on the abdomen. He was in a state of exceeding collapse, from which he rallied to such a degree that hopes were entertained of his recovery, and the antiphlogistic treatment was put partially in force. He died, however, ten days after the accident, and on examining the body, nearly four pounds of coagulated blood were found effused in the abdomen, proceeding from a stellated fracture or laceration of the left lobe of the liver, from which the gall-bladder was partly separated. The organ was much softened, and the spleen was reduced to a pulsataceous mass, of a chocolate color. There were also evidences of peritoneal inflammation of a sub-acute character.—*London Med. Times.*

Conical Cornea.—Mr. Jervis has published the details of two cases of conical cornea successfully treated. In the first case, he exhibited wine and steel, blistered the temples, punctured the cornea repeatedly, and applied the nitrate of silver to the cone three times a week. An ointment compounded with the nitric oxide of mercury, was also applied daily to the eyelid. In the second case, the nitrate of silver was used, and the temple was blistered; but Dr. Pickford's plan was also had recourse to.—*Ibid.*

TO CORRESPONDENTS.—The communications of Drs. Addison, Tabor and Magoun have been received.

MARRIED.—At Haverhill, N. H., Dr. Oliver W. Drew, of Waterbury, Vt., to Miss O. L. B. Atherton.

Number of deaths in Boston, for the week ending Jan. 4, 38—Males, 17; Females, 21. Stillborn, 5. Of consumption, 7—lung fever, 2—droopy on the brain, 3—hooping cough, 2—infantile, 4—scarlet fever, 4—palsy, 1—peritonitis, 1—accidental, 1—croup, 2—droopy, 1—inflammation of the bowels, 2—stoppage in the bowels, 1—old age, 2—typhus fever, 2—inflammation in the head, 1—droopy on the heart, 1—marasmus, 1.

Under 5 years, 19—between 5 and 20 years, 5—between 20 and 60 years, 10—over 60 years, 4.

Duration of Pregnancy.—This subject has been investigated by Professor Murphy, and, as stated by him in the Dublin Journal, some curious and useful facts are the result. The number of cases in which accurate information was procured was 186; in each the catamenial period was noticed; and

"To prevent error arising from uncertainty as to the exact date of conception, this interval was deducted from the whole number of days of pregnancy; thus, 328—23 would make the duration of pregnancy 300 days."

The results thus ascertained establish 301 days as the average limit of gestation. To this there are, however, three remarkable exceptions. In the first a fully developed child was born after an interval of 261 days. The evidence in this instance (an unmarried female, stating herself to be pregnant after one connection) is not wholly to be relied on. In two other cases the duration of pregnancy extended to 342 and 352 days, or deducting the menstrual period, to 324 and 314 days respectively. The histories of those cases given in detail are such as to lead to the conclusion that pregnancy may be prolonged to this extended period—a fact of great importance to the medical jurist. The relation of pregnancy to previous menstruation is referred to, and some exceptional cases are recorded. Thus in one instance pregnancy occurred without previous menstruation; in another, menstruation ceased on marriage, and in a few cases periodic discharges resembling the catamenia were present during pregnancy.

Matico successfully used in Hæmorrhage from Leech-Bites. By WM. ECCLES, Esq., Surgeon, London.—I was called, a few months ago, to a very obstinate case of bleeding from leech-bites, and having read an advertisement, lauding the efficacy of matico as a styptic, I immediately procured some from Mr. Keating's, of St. Paul's Church-yard, and used it in the manner recommended by Dr. Jeffrey, of Liverpool—namely, by placing a small piece upon the bleeding spot, taking care that the under surface of the leaf was applied to the bite, and pressing for a moment gently with the finger. The effect was almost magical; the hæmorrhage—which was profuse, and had continued for eight hours—was completely arrested in a few seconds. I have since used this remedy in several instances, and have always found it successful.—*London Lancet.*

Hydrocyanic Acid in Opacity of the Cornea.—Mr. Walker has published in the Provincial Medical Journal, a case of central opacity of the cornea, in which he gave a trial to the vapor of hydrocyanic acid, a preparation being used which was twice the strength of Scheele's, and which was kept in contact with the eyes for two minutes. A sensation of heat was experienced, with slight uneasiness, scarcely amounting to pain. Increased vascularity was also observable, and the eyes were watery. None of these effects, however, were so intense as after the use of the sulphate of copper to the eyelids, and they disappeared more quickly. The remedy proved to be of no service, and artificial pupils were afterwards made. Mr. Walker says, he has tried it in a few other cases with the same result. He has no doubt it will be useful in some cases, in those where other stimulants would act beneficially; but he is satisfied that a case which does not yield to ordinary stimulants will never be benefited by it.—*Times.*